No. 200600260

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Enza Zaden Beheer B.V.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

LETTUCE

'Antago'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of Washington, D.C. this seventh day of April, in the year two thousand and eight.*

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions* — Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
ENZA ZADEN BEHEER B.V.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
E19.6360

3. VARIETY NAME
ANTAGO

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
P.O. Box 7, 1600 AA ENKHUIZEN
HALING 1E, 1602 DB ENKHUIZEN
THE NETHERLANDS

5. TELEPHONE *(include area code)*
+31.228.315.844

6. FAX *(include area code)*
+31.228.315.854

FOR OFFICIAL USE ONLY

PVPO NUMBER
200600260

FILING DATE
Aug. 4, 2006

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
CORPORATION

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
NOORD-HOLLAND

9. DATE OF INCORPORATION
1938

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
ENZA ZADEN RESEARCH USA, INC
ATTN: AERNOUDT AARDSE, MONIA SKRSYNIARZ
P.O. Box 866
SAN JUAN BAUTISTA, CA 95045

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 4382 00
DATE 08/04/2006

CERTIFICATION FEE:
$ 768 00
DATE 3/11/08

11. TELEPHONE (Include area code)
831-623.4644

12. FAX (Include area code)
831-623.1746

13. E-MAIL
a.aardse@coastalseeds.com

14. CROP KIND *(Common Name)*
LETTUCE

16. FAMILY NAME *(Botanical)*
COMPOSITAE

15. GENUS AND SPECIES NAME OF CROP
LACTUCA SATIVA L.

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☒ NO

18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (***OPTIONAL***)
☐ YES ☒ NO
IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERICALIZATION. _____

19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED
(Follow instructions on reverse)

a. ☒ Exhibit A. Origin and Breeding History of the Variety
b. ☒ Exhibit B. Statement of Distinctness
c. ☒ Exhibit C. Objective Description of Variety
d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☒ Exhibit F. Declaration Regarding Deposit
g. ☒ Voucher Sample *(3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☒ Filing and Examination Fee ($4,382), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)*
☐ YES *(If "yes", answer items 21 and 22 below)* ☒ NO *(If "no", go to item 23)*

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
☐ YES ☐ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☒ YES ☐ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☒ YES ☐ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is ~~(are) informed~~ that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER		SIGNATURE OF OWNER	
NAME *(Please print or type)* J.J.M. LAMBALK		NAME *(Please print or type)*	
CAPACITY OR TITLE DIRECTOR R&D	DATE AUG. 3. 2006	CAPACITY OR TITLE	DATE

(See reverse for instructions and information collection burden statement)

GENERAL INSTRUCTIONS: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E, F; (3) for a tuber reproduced variety, verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; and (4) payment by credit card or check drawn on a U.S. bank for $4,382 ($518 filing fee and $3,864 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice).* **NEW:** With the application for a seed reproduced variety **or by direct deposit soon after filing**, the applicant must provide at least 3,000 viable untreated seeds of the variety *per se*, and for a hybrid variety at least 3,000 untreated seeds of each line necessary to **reproduce** the variety. Partial applications will be held in the PVPO for not more than 90 days; then returned to the applicant as un-filed. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a payment by credit card or check payable to "Treasurer of the United States" in the amount of $768 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

Plant Variety Protection Office
Telephone: (301) 504-5518 **FAX:** (301) 504-5291
General E-mail: PVPOmail@usda.gov
Homepage: http://www.ams.usda.gov/science/pvpo/PVPindex.htm

20060260

SPECIFIC INSTRUCTIONS:
To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and **provide evidence** that the permanent name of the application variety (even if it is a parental, inbred line) has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: U.S. Department of Agriculture, Agricultural Marketing Service, Livestock and Seed Programs, **Seed Regulatory and Testing Branch**, 801 Summit Crossing Place, Suite C, Gastonia, North Carolina 28054-2193 Telephone: (704) 810-8870. http://www.ams.usda.gov/lsg/seed.htm.

ITEM

19a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach replicated statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

20. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

23. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

24. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

22. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

23. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

SEE ENCLOSED ADDENDUM TO PVP APPLICATION FORM

24. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

SEE ENCLOSED ADDENDUM TO PVP APPLICATION FORM

Addendum
Form Application for Plant Variety Protection Certificate

Ad Paragraph 23: Dates of first sale and countries of lettuce variety Antago

Australia	30 June, 2005
France	19 August, 2004
Spain	27 June, 2005
Sweden	3 September, 2004
United Kingdom	6 August, 2004
Germany	8 August, 2005
USA	6 August, 2005

Ad Paragraph 24: Intellectual property right information of Antago and components

Antago:
EU – B list, NL, instance NAK, application date 02/07/2003, application code 14475.
Argeles:
EU – A list (European Breeders Right), France, instance EURO, application date 03/24/1997, application code 1997/0401, registration code EU 03147, registered until 06/30/2008.

Exhibit A – Origin and Breeding History

Lettuce variety: ANTAGO

Origin

Antago is derived from a cross made in May 1999 between the Lollo Rossa breeding line 'E19.2060' and a black seeded, heading greenhouse Batavia 'Argeles'.
The breeding line 'E19.2060' was a Lollo Rossa resistant to European *Bremia lactucae* races Bl: 1-16, 21, 23. This breeding line was originated from successive crosses of the Lollo rossa variety 'Impuls' with the Lollo rossa varieties 'Sigla' and 'Rocket'.
The variety 'Argeles' is a heading greenhouse Batavia, resistant to European *Bremia lactucae* races Bl: 1-22, 25.
The objective of this cross was to develop a Lollo Rossa line combining both resistant factors for resistance to *Bremia lactucae* races Bl: 1-23, 25.
Antago (experimental code E19.6360) is a short, dented and curly red leaf resistant to European Bremia *lactucae* races Bl: 1-23, 25. It is used as a 'Lollo Rossa' for baby leaf production, for year round harvests. It is black seeded.
The pedigree method of plant breeding using single plant and mass selection was employed to develop this variety

Breeding Stages

F1: May 1999: the cross was made between E19.2060 and Argeles.
June 1999: seeds from this cross were sown and 10 plants transplanted for multiplication in a greenhouse at Enza Holland facilities -Enkhuizen
Those plants were tested with the bremia race Bl: 18 to check the cross efficiency. All of them were resistant, and seeds were harvested in bulk in November 1999 under the F2 line number 29320.

F2 : Seeds of the **F2 line 29320** were sown in peat blocks in December 1999 and transplanted 7 weeks after in a selection field under 6 meter plastic tunnel in the Enza France facilities in Allonnes (France). A single plant selection of a Lollo Rossa- like plant was made **April 2000**. Selected plants were transferred and transplanted in a glasshouse in the Enza Holland (Enkhuizen) facilities for seed multiplication. Bioassays from leaf discs of those plants were tested for resistance to Bremia race Bl: 18. These plants were also screened using molecular markers for resistance factors to *Bremia lactucae* races Bl:1-23,25. Four (4) plants were resistant, and seeds of them harvested individually in July 2000, providing seeds of the F3 generation.

F3: Seeds of those F3 lines were sown in peat blocks in February 2001 and transplanted in early april in an open field selection field in the Enza-France facility in Allonnes (France). Those lines were evaluated both at the young plant stage (just before transplanting) and at the full mature stage (**May 2001**).
F3 line 0015962 showed the most interesting potential regarding colour, leaf shape and texture for a baby leaf purpose. A single plant selection was made in this line in June 2001. Four (4) selected plants were transferred in a plastic tunnel greenhouse in Enza-France facility for seed multiplication.
Those plants were tested in a bioassay on leaf disks for Bremia races Bl: 18 and Bl: 21, and also screened using molecular markers for resistance factors to *Bremia lactucae* races Bl:1-23,25. All of the selected plants were resistant, and seeds from these plants were harvested as single plant selections, during September 2001, providing seeds of the F4 generation

F4: Seeds of those F4 lines were sown in peat blocks in October 2001 in Australia and transplanted early November 2001 in a breeding nursery in Griffith (New South Wales, Australia). Evaluation has been done at fully mature stage in **December 2001**.**F4 lin e 0136360** showed the best colour and leaf type. The **F4 line 0136360** was the most uniform for type.
This line was coded as the **new experimental variety E19.6360**. Eight (8) plants were selected in this field, defoliated and left in the field for a seed multiplication. Seeds of those plants were harvested in February 2002, providing seeds of the F5 generation. Each lot was tested on seedlings for Bremia race Bl: 18 , and all of them were uniformly resistant.

F5: Seeds of those F5 lines of the experimental number E19.6360 were sown in peat blocks in early March 2002 and transplanted at the end of March in a selection field at the Enza-France facilities in Allonnes (France). Lines were judged on their uniformity in **May 2002**. The **F5 line 0230616** was evaluated as the most uniform one and kept as the foundation seed for a trial production.
Some plants were, nevertheless, selected in this F5 line 0230616 to increase homozygosity of the variety. After transplanting in a plastic tunnel greenhouse, each plant was checked with a marker for resistance factor to Bl:1-23,25
Seeds from those plants were harvested individually in September 2002, providing seeds of the F6 generation and future commercial foundation seeds.
In the same period a baby leaf trial (direct sowing at 800pl/m² density) has been set up in the Enza France facilities, and the F5 lines of the E19.6360 evaluated for their performance at a baby leaf stage.

F6: Seeds of the F6 lines 0238333, 0238391 and 0238392 were sown for commercial seed production in Griffith (New South Wales, Australia) in October 2002. Those seed production were harvested in Spring 2003 for first sales.

European registration of the variety was started in February 2003 by an application file submitted at the Naktuinbouw in Holland. The name of 'Antago' was given to the experimental E19.6360, and is officially published in Europe from July 07th 2003.
The F7 lines derived from the above F6 lines are free of variants and have been used for producing new foundation seed. Subsequent cycles of seed productions have been free of variants.
The variety Antago has been observed since 2001 for 9 generations of reproduction during the seed increase period and is stable and uniform.

RMD 2/25/08

MOST

Exhibit B - Statement of Distinctiveness

Lettuce variety: ANTAGO

Antago is a lollo rossa lettuce type developed for the 'baby leaf' salad mix market.

Antago closely resembles Mercury and Loretta, however, can be distinguished for the following characteristics:

1) Antago is black seeded while Mercury and Loretta are both white seeded
2) Antago is resistant to European *Bremia lactucae* races Bl: 1-23 and 25 while both Mercury and Loretta are resistant to races Bl: 1-16, 21 and 25.
3) Antago is resistant to California *Bremia lactucae* races CAVII and CAVIII while both Mercury and Loretta are susceptible to races CAVII and CAVIII.
4) Antago is less frilled compared to Mercury and Loretta (see pictures exhibit C).
5) Antago has a larger plant size, leaf size, and plant weight compared to Loretta and Mercury (see data exhibit C).
6) Antago is earlier bolting compared to Loretta and Mercury (see data exhibit C).

Antago has a red intense color resembling 187A of the RHS color chart.

- Antago

Scoring Downy Mildew (*Bremia Lactucae*)

Leaf disk test Bremia Lactucae, CA VII isolate
3 leaf samples per plant, inoculation: 7/20/2006, final reading: 7/31/2006

Culitvar	total # plants	+	-	Result
Antago	9	0	9	resistant
Argeles	9	0	9	resistant
E19.2060	9	9	0	susceptible
Loretta	9	9	0	susceptible
Mercury	9	9	0	susceptible

Seedling test Bremia Lactucae, CA VII isolate
3 leaf samples per plant, inoculation: 1/3/2005, final reading: 1/10/2005

Cultivar	total # plants	+	-	Result
Antago	18	0	18	resistant
Colorado	7	7	0	susceptible
Discovery	22	0	22	resistant

- no sporulation, + sporulation

- Antago (addition)
Scoring Downy Mildew (*Bremia Lactucae*)

Leaf disk test Bremia Lactucae, CA VII isolate
3 leaf samples per plant, inoculation: 11/8/2006, final reading: 11/20/2006

Culitvar	total # plants	+	-	Result
Antago (rep 1)	12	0	12	resistant
Antago (rep 2)	12	0	12	resistant
Mercury (rep 1)	12	12	0	susceptible
Mercury (rep 2)	12	12	0	susceptible
Loretta (rep 1)	12	12	0	susceptible
Loretta (rep 2)	12	12	0	susceptible
E19.2060	12	12	0	susceptible
Argeles	12	0	12	resistant

Seedling test Bremia Lactucae, CA VII isolate
inoculation: 12/5/2006, final reading: 12/20/06

Cultivar	total # plants	+	-	Result
Antago (rep 1)	16	0	16	resistant
Antago (rep 2)	16	1	15	resistant
Mercury (rep 1)	16	16	0	susceptible
Mercury (rep 2)	16	16	0	susceptible
Loretta (rep 1)	16	16	0	susceptible
Loretta (rep 2)	16	16	0	susceptible
E19.2060 (rep 1)	15	13	2	susceptible
E19.2060 (rep 2)	16	16	0	susceptible
Argeles (rep 1)	12	2	10	resistant
Argeles (rep 2)	16	1	15	resistant

- no sporulation, + sporulation

Seedling test Bremia Lactucae, CA VIII isolate
inoculation: 1/30/2007, final reading: 2/7/2007

Culitvar	total # plants	+	-	Result
Antago (rep 1)	16	0	16	resistant
Antago (rep 2)	16	0	16	resistant
Antago (rep 3)	16	0	16	resistant
Mercury (rep 1)	16	16	0	susceptible
Mercury (rep 2)	16	16	0	susceptible
Loretta (rep 1)	16	16	0	susceptible
Loretta (rep 2)	17	17	0	susceptible
E19.2060 (rep 1)	16	16	0	susceptible
E19.2060 (rep 2)	15	15	0	susceptible
Argeles (rep 1)	14	1	14	resistant
Argeles (rep 2)	16	0	16	resistant

- no sporulation, + sporulation

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

Exhibit C

OBJECTIVE DESCRIPTION OF VARIETY
Lettuce *(Lactuca sativa* L.*)*

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
ENZA ZADEN BEHEER B.V.	E19.6360	ANTAGO

ADDRESS *(Street and No. or RD No., City, State, Zip Code, and Country)*
HALING 1E, 1602 DB ENKHUIZEN
PO BOX 7, 1600 AA ENKHUIZEN
THE NETHERLANDS

FOR OFFICIAL USE ONLY

PVPO NUMBER
20060260

Place the appropriate number that describes the varietal character in the boxes below. Place a zero in the first box (e.g. [0][9][9] or [0][9]) when number is either 99 or less or 9 or less. Measured data should be the mean of an appropriate number (at least 20) of well space plants. Royal Horticultural Society or any recognized color standard may be used to determine plant colors.

The Location of the Test Area is:	Color System Used:
SAN JUAN BAUTISTA, CALIFORNIA	RHS

SPECIFIC VARIETIES USED FOR COMPARISON AS CHECK VARIETIES IN THIS APPLICATION: Use standard regional check varieties, which are adapted to your area. One of the comparison varieties must be the most similar variety used in Exhibit B.

Application Variety (a1) ANTAGO Most Similar Variety (c1) MERCURY

Standard Regional Check Variety (c2) LORETTA

1. PLANT TYPE: (See List of Suggested Check Varieties on Page 8)

01 = Cutting/Leaf
02 = Butterhead
03 = Bibb
04 = Cos or Romaine
05 = Great Lakes Group
06 = Vanguard Group
07 = Salinas Group
08 = Eastern (Ithaca) Group
09 = Stem
10 = Latin
11 = Other (Specify) _____

(a1) [0][1] (c1) [0][1] (c2) [0][1]

2. SEED:

COLOR (1 = White (Silver Gray), 2 = Black (Grey Brown), 3 = Brown (Amber))
(a1) [2] (c1) [1] (c2) [1]

LIGHT DORMANCY (1 = Light Required, 2 = Light Not Required)
(a1) [2] (c1) [2] (c2) [2]

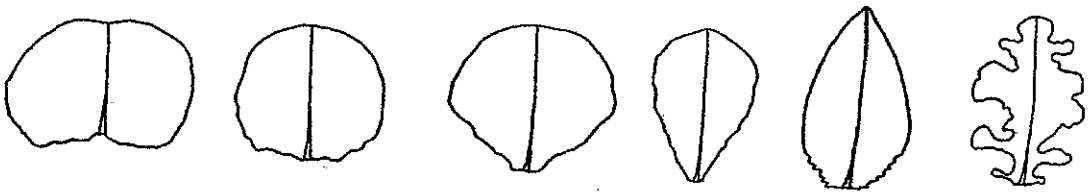
HEAT DORMANCY (1 = Susceptible, 2 = Not Susceptible)
(a1) [ ] (c1) [ ] (c2) [ ]

3. COTYLEDON TO FOURTH LEAF STAGE: NOTE: Provide a color photograph or photocopy of the fourth leaf from 20 day-old seedling grown under optimal conditions.

SHAPE OF COTYLEDONS: 1 = Broad 2 = Intermediate 3 = Spatulate
(a1) [2] (c1) [2] (c2) [2]

SHAPE OF FOURTH LEAF: (a1) [2] (c1) [1] (c2) [1]

3. COTYLEDON TO FOURTH LEAF STAGE: (continued)



1. Transverse oval 2. Round 3. Oval 4. Elongated 5. Lanceolate 6. Pinnately lobed

LENGTH/WIDTH INDEX OF FOURTH LEAF: L/W x 10

(a1) 14 (c1) 13 (c2) 11

APICAL MARGIN:
1 = Entire
2 = Crenate/Gnawed
3 = Finely Dentate
4 = Moderately Dentate
5 = Coarsely Dentate
6 = Incised
7 = Lobed
8 = Other (Specify) _____

(a1) 3 (c1) 3 (c2) 3

BASAL MARGIN: (Use the options for Apical Margin above)

(a1) 3 (c1) 3 (c2) 3

UNDULATION: 1 = Flat 2 = Slight 3 = Medium 4 = Marked

(a1) 3 (c1) 3 (c2) 3

GREEN COLOR:
1 = Yellow Green
2 = Light Green
3 = Medium Green
4 = Dark Green
5 = Blue Green
6 = Silver Green
7 = Grey Green

(a1) [blank] (c1) 3 (c2) 3

ANTHOCYANIN:

DISTRIBUTION:
1 = Absent
2 = Margin Only
3 = Spotted
4 = Throughout
5 = Other (Specify) UPPER LEAF PART

(a1) 4 (c1) 5 (c2) 5

CONCENTRATION: 1 = Light 2 = Moderate 3 = Intense

(a1) 3 (c1) 3 (c2) 3

ROLLING: 1 = Absent 2 = Present

(a1) 1 (c1) 1 (c2) 1

CUPPING: 1 = Uncupped 2 = Slight 3 = Markedly

(a1) 1 (c1) 1 (c2) 1

REFLEXING: 1 = None 2 = Apical Margin 3 = Lateral Margins

(a1) 1 (c1) 1 (c2) 1

4. MATURE LEAVES (Observe Harvest-Mature Outer Leaves)

NOTE: Provide color photo of a harvest-mature leaf which accurately shows color and margin characteristics.

MARGIN:

INCISION DEPTH: (deepest penetration of the margin) 1 = Absent/Shallow (Dark Green Boston) 2 = Moderate (Vanguard) 3 = Deep (Great Lakes 659)

(a1) [1] (c1) [1] (c2) [1]

INDENTATION: (Finest divisions of the margin)

1 = Entire (Dark Green Boston)
2 = Shallowly Dentate (Great Lakes 65)
3 = Deeply Dentate (Great Lakes 659)
4 = Crenate (Vanguard)
5 = Other (Specify) _____

(a1) [2] (c1) [2] (c2) [2]

UNDULATIONS OF THE APICAL MARGIN: 1 = Absent/Slight (Dark Green Boston) 2 = Moderate (Vanguard) 3 = Strong (Great Lakes 659)

(a1) [2] (c1) [3] (c2) [3]

GREEN COLOR:

1 = Very Light Green (Bibb)
2 = Light Green (Minetto)
3 = Medium Green (Great Lakes)
4 = Dark Green (Vanguard)
5 = Very Dark Green
6 = Other (Specify) _____

(a1) [ ] (c1) [ ] (c2) [ ]

ANTHOCYANIN:

DISTRIBUTION:

1 = Absent
2 = Margin Only (Big Boston)
3 = Spotted (California Cream Butter)
4 = Throughout (Prize Head)
5 = Other (Specify) _____

(a1) [4] (c1) [4] (c2) [4]

CONCENTRATION: 1 = Light (Iceberg) 2 = Moderate (Prize Head) 3 = Intense (Ruby)

(a1) [3] (c1) [3] (c2) [3]

SIZE: 1 = Small 2= Medium 3 = Large

(a1) [2] (c1) [1] (c2) [1]

GLOSSINESS: 1 = Dull (Vanguard) 2 = Moderate (Salinas) 3 = Glossy (Great Lakes)

(a1) [3] (c1) [3] (c2) [3]

BLISTERING: 1 = Absent/Slight (Salinas) 2 = Moderate (Vanguard) 3 = Strong (Prize Head)

(a1) [2] (c1) [2] (c2) [2]

LEAF THICKNESS: 1 = Thin 2 = Intermediate 3 = Thick

(a1) [2] (c1) [2] (c2) [2]

TRICHOMES: 1 = Absent (Smooth) 2 = Present (Spiny)

(a1) [2] (c1) [2] (c2) [2]

5. PLANT:

SPREAD OF FRAME LEAVES: (a1) [35] cm (c1) [29] cm (c2) [29] cm

5. PLANT: (continued)

HEAD DIAMETER: (Market Trimmed with Single Cap Leaf)

(a1) 29 cm (c1) 24 cm (c2) 24 cm

HEAD SHAPE: 1 = Flattened 2 = Slightly Flattened 3 = Spherical 4 = Elongate 5 = Non-Heading

6 = Other (Specify)_____

(a1) 5 (c1) 5 (c2) 5

HEAD SIZE CLASS: 1 = Small 2 = Medium 3= Large

(a1) 2 (c1) 1 (c2) 1

HEAD PER CARTON:

(a1) (c1) (c2)

HEAD WEIGHT:

(a1) 197 g. (c1) 145 g. (c2) 146 g.

HEAD FIRMNESS: 1 = Loose 2 = Moderate 3= Firm 4 = Very Firm

(a1) 1 (c1) 1 (c2) 1

6. BUTT:

SHAPE: 1 = Slightly Concave 2 = Flat 3 = Rounded

(a1) 1 (c1) 1 (c2) 1

MIDRIB: 1 = Flattened (Salinas) 2 = Moderately Raised 3 = Prominently Raised (Great Lakes 659)

(a1) 3 (c1) 3 (c2) 3

7. CORE:

DIAMETER AT BASE OF HEAD:

(a1) 18 mm (c1) 14 mm (c2) 14 mm

RATIO OF HEAD DIAMETER/CORE DIAMETER:

(a1) 1.6 (c1) 1.8 (c2) 1.7

CORE HEIGHT FROM BASE OF HEAD TO APEX:

(a1) 174 mm (c1) 105 mm (c2) 88 mm

8. BOLTING: (Give First Water Date: 05/20/2006) NOTE: First Water Date is the date seed first receives adequate moisture to germinate. This can and often does equal the planting date.

NUMBER OF DAYS FROM FIRST WATER DATE TO SEED STALK EMERGENCE: (summer conditions)

(a1) 65 (c1) 69 (c2) 71

BOLTING CLASS: 1 = Very Slow 2 = Slow 3 = Medium 4 = Rapid 5 = Very Rapid

(a1) 4 (c1) 3 (c2) 3

HEIGHT OF MATURE SEED STALK:

(a1) (c1) (c2)

(a1) cm (c1) cm (c2) cm

8. **BOLTING:** (continued)

SPREAD OF BOLTER PLANT: (At widest point)

(a1) ☐☐ cm (c1) ☐☐ cm (c2) ☐☐ cm

BOLTER LEAVES: 1 = Straight 2 = Curved

(a1) [2] (c1) [2] (c2) [2]

MARGIN: 1 = Entire 2 = Dentate

(a1) [2] (c1) [2] (c2) [2]

COLOR: 1 = Light Green 2 = Medium Green 3 = Dark Green 4 = Red

(a1) [4] (c1) [4] (c2) [4]

BOLTER HABIT:

TERMINAL INFLORESCENCE: 1 = Absent 2 = Present

(a1) [2] (c1) [2] (c2) [2]

LATERAL SHOOTS: 1 = Absent 2 = Present

(a1) [2] (c1) [2] (c2) [2]

BASAL SIDE SHOOTS: 1 = Absent 2 = Present

(a1) [1] (c1) [1] (c2) [1]

9. **MATURITY:** (earliness of harvest-mature head formation)

NOTE: Complete this section for at least one season.

SEASON	APPLICATION VARIETY No. of Days[1]			MOST SIMILAR VARIETY No. of Days[1]			STANDARD REGIONAL CHECK VARIETY No. of Days[1]		
Spring									
Summer	1) 58	2) 25	3) 23	1) 60	2) 30	3) 27	1) 60	2) –	3) –
Fall									
Winter	1) 34	2) 32		1) 40	2) 39		1) –	2) –	

[1] *First Water Date to Harvest*

Give Planting Date(s) and Location(s):

Spring:

Summer: 1) SAN JUAN BAUTISTA, CA, 05/20/06 (MATURE STAGE), 2) GONZALES, CA, 06/16/06 (BABY STAGE), 3) SAN JUAN BAUTISTA, CA, 6/23/06 (BABY STAGE)

Fall:

Winter: 1) KING CITY, CA, 02/20/06 (BABY STAGE), 2) SAN LUCAS, CA, 02/28/06 (BABY STAGE)

10. **ADAPTATION:**

PRIMARY REGIONS OF ADAPTATION (tested and proven adapted):

0 = Not Tested 1 = Not Adapted 2 = Adapted

[2] Southwest (CA and/or AZ desert)
[0] North Central
[2] West Coast
[0] Southeast
[2] Northeast
[ ] Other (Specify) _____

10. ADAPTATION: (Continued)

SEASON:

[2] Spring (Area SOUTH-WEST, WEST COAST) [2] Fall (Area WEST-COAST, NORTH-EAST)

[2] Summer (Area WEST COAST, NORTH-EAST) [2] Winter (Area SOUTH-WEST, WEST COAST)

[0] **GREENHOUSE**: 0 = Not Tested 1 = Not Adapted 2 = Adapted

[3] **SOIL TYPE**: 1 = Mineral 2 = Organic 3 = Both

11. VIRAL DISEASES:

1 = Immune 3 = Resistant 5 = Moderately Resistant/Moderately Susceptible 7 = Susceptible 9 = Highly Susceptible

	(a1)	(c1)	(c2)
Big Vein	[0]	[0]	[0]
Lettuce Mosaic	[7]	[7]	[7]
Cucumber Mosaic	[0]	[0]	[0]
Tomato Bushy Stunt, cause of dieback	[0]	[0]	[0]
Turnip Mosaic	[0]	[0]	[0]
Beet Western Yellows	[0]	[0]	[0]
Lettuce Infectious Yellows	[0]	[0]	[0]
Other (Specify) _____	[0]	[0]	[0]

0 = NOT TESTED

12. FUNGAL/BACTERIAL DISEASES:

1 = Immune 3 = Resistant 5 = Moderately Resistant/Moderately Susceptible 7 = Susceptible 9 = Highly Susceptible

	(a1)	(c1)	(c2)
Corky Root Rot (Races: _____)	[0]	[0]	[0]
Downy Mildew (Races: CA VII, CA VIII, BL:1-23,25)	[3]	[7]	[7]
Powdery Mildew	[0]	[0]	[0]
Sclerotinia Drop	[0]	[0]	[0]
Bacterial Soft Rot (*Pseudomonas* spp. and others)	[0]	[0]	[0]
Botrytis (Grey Mold)	[0]	[0]	[0]
Verticillium Wilt	[0]	[0]	[0]
Bacterial Leaf Spot	[0]	[0]	[0]
Anthracnose	[0]	[0]	[0]
Other (Specify) _____	[0]	[0]	[0]

13. INSECTS:

1 = Immune 3 = Resistant 5 = Moderately Resistant/Moderately Susceptible 7 = Susceptible 9 = Highly Susceptible

	(a1)	(c1)	(c2)
Cabbage Loopers	[0]	[0]	[0]
Root Aphids	[0]	[0]	[0]
Green Peach Aphid	[0]	[0]	[0]
Lettuce Aphid	[0]	[0]	[0]

Pea Leafminer	(a1)	0	(c1)	0	(c2)	0
Other (Specify) _____	(a1)	0	(c1)	0	(c2)	0

14. PHYSIOLOGICAL STRESSES:

1 = Immune 3 = Resistant 5 = Moderately Resistant/Moderately Susceptible 7 = Susceptible 9 = Highly Susceptible

Tipburn	(a1)	0	(c1)	0	(c2)	0
Heat	(a1)	0	(c1)	0	(c2)	0
Drought	(a1)	0	(c1)	0	(c2)	0
Cold	(a1)	0	(c1)	0	(c2)	0
Salt	(a1)	0	(c1)	0	(c2)	0
Brown Rib (Rib Discoloration, Rib Blight)	(a1)	0	(c1)	0	(c2)	0
Other (Specify) _____	(a1)	0	(c1)	0	(c2)	0

15. POST HARVEST STRESS:

1 = Immune 3 = Resistant 5 = Moderately Resistant/Moderately Susceptible 7 = Susceptible 9 = Highly Susceptible

Pink Rib	(a1)	0	(c1)	0	(c2)	0
Russet Spotting	(a1)	0	(c1)	0	(c2)	0
Rusty Brown Discoloration	(a1)	0	(c1)	0	(c2)	0
Internal Rib Necrosis (Blackheart, Grey Rib, Grey Streak)	(a1)	0	(c1)	0	(c2)	0
Brown Stain	(a1)	0	(c1)	0	(c2)	0

16. BIOCHEMICAL OR ELECTROPHORETIC MARKERS:

17. COMMENTS:

SUGGESTED CHECK VARIETIES

	TYPE	CHECK VARIETY
1	Cutting/Leaf	Waldmann's Green
2	Butterhead	Dark Green Boston
3	Bibb	Bibb
4	Cos or Romain	Parris Island
5	Great Lakes Group	Great Lakes 659-700
6	Vanguard Group	Vanguard
7	Salinas Group	Salinas
8	Eastern Group	Ithaca
9	Stem	Celtuce
10	Latin	Little Gem

REFERENCES

Bowring, J.D.C., 1969, "*The Identification of Varieties of Lettuce (Lactuca Sativa* L.)". Journal of the National Institute of Agricultural Botany 11:499-520. National Institute of Agricultural Botany, Cambridge, UK.

Davis, R.M., K.V. Subbarao, R.N. Raid, and E.A. Kurtz, 1997. "*Compendium of Lettuce Diseases*". APS Press, St. Paul, MN.

Michelmore, R.W., J. M. Norwood, D.S. Ingram, I.R. Crute and P. Nicholson. 1984. "*The interitance of virulence in Bremia lactucae to match resistance factors 3, 4, 5, 6, 8, 9, 10, and 11 in lettuce (Lactuca sativa)*", Plant Pathology 32:176-177.

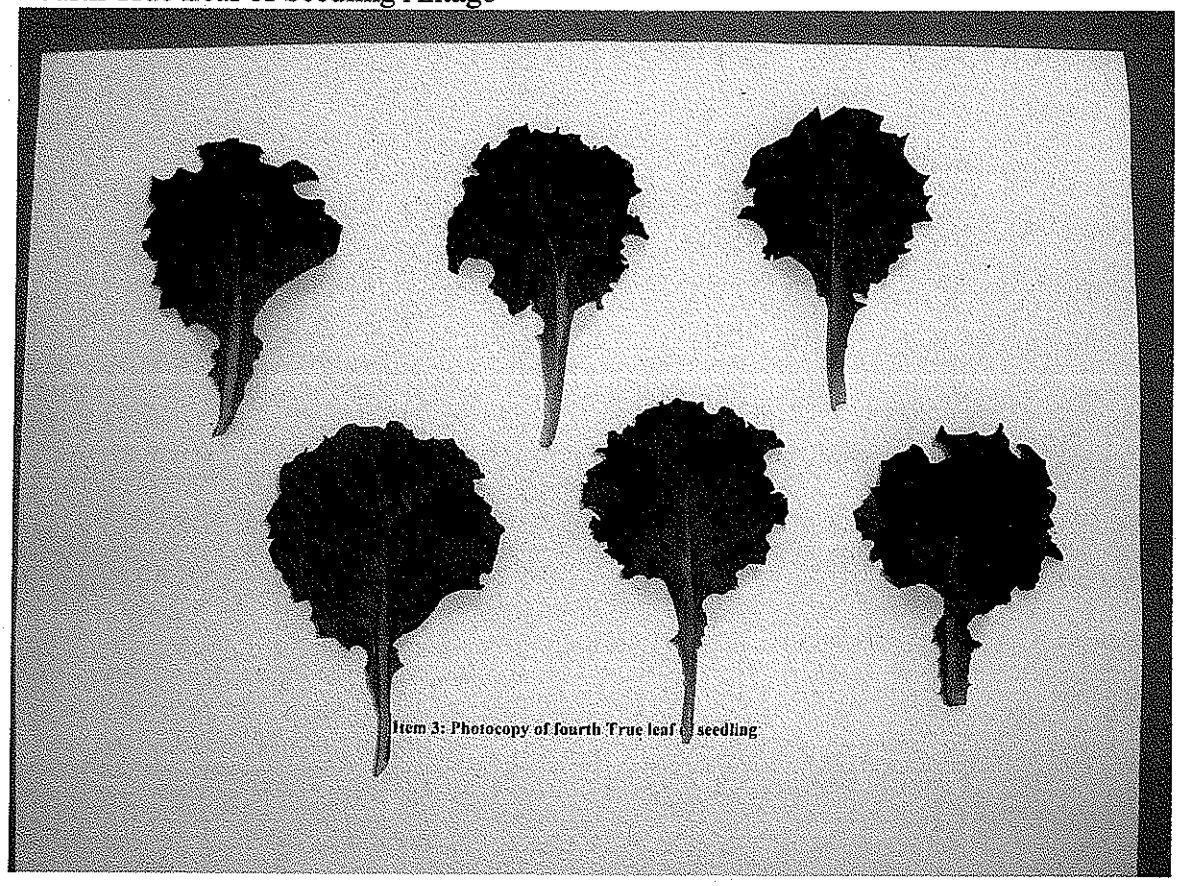
Norwood, J.M., R.W. Michelmore, I.R. Crute and D.S. Ingram. 1983. "*The inheritance of specific virulence of Bremia lactucae (Downy Mildew) to match R-factors 1, 2, 4, 6, and 11 in lettuce (Lactuca sativa)*". Plant Pathology 32:176-177.

Rodenburg, C.M., et al., 1960. "*Varieties of Lettuce. An International Monograph*", Instituut voor de Verdeling van Tuinbouwgewassen (IVT), Wageningen, NL.

Ryder, E.J., 1999, *Lettuce, Endive, and Chicory*, CABI Publications, Wallingford, UK.

Exibit C – Antago

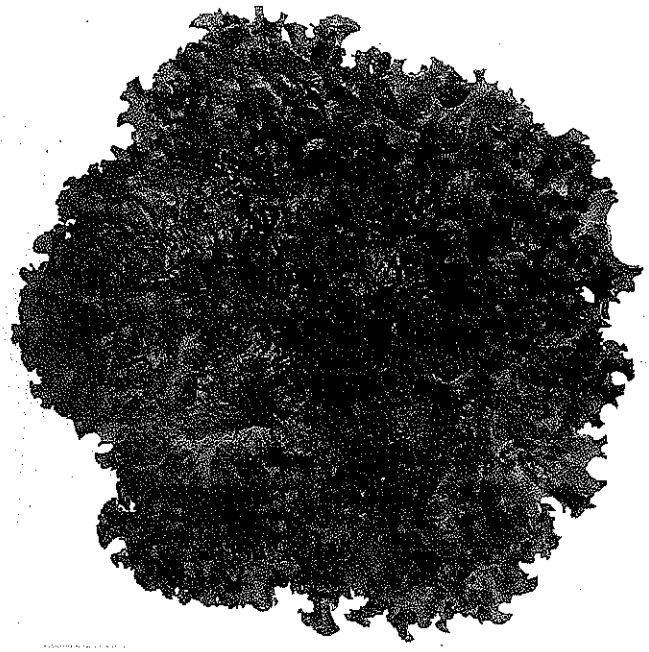
Fourth True Leaf of Seedling Antago

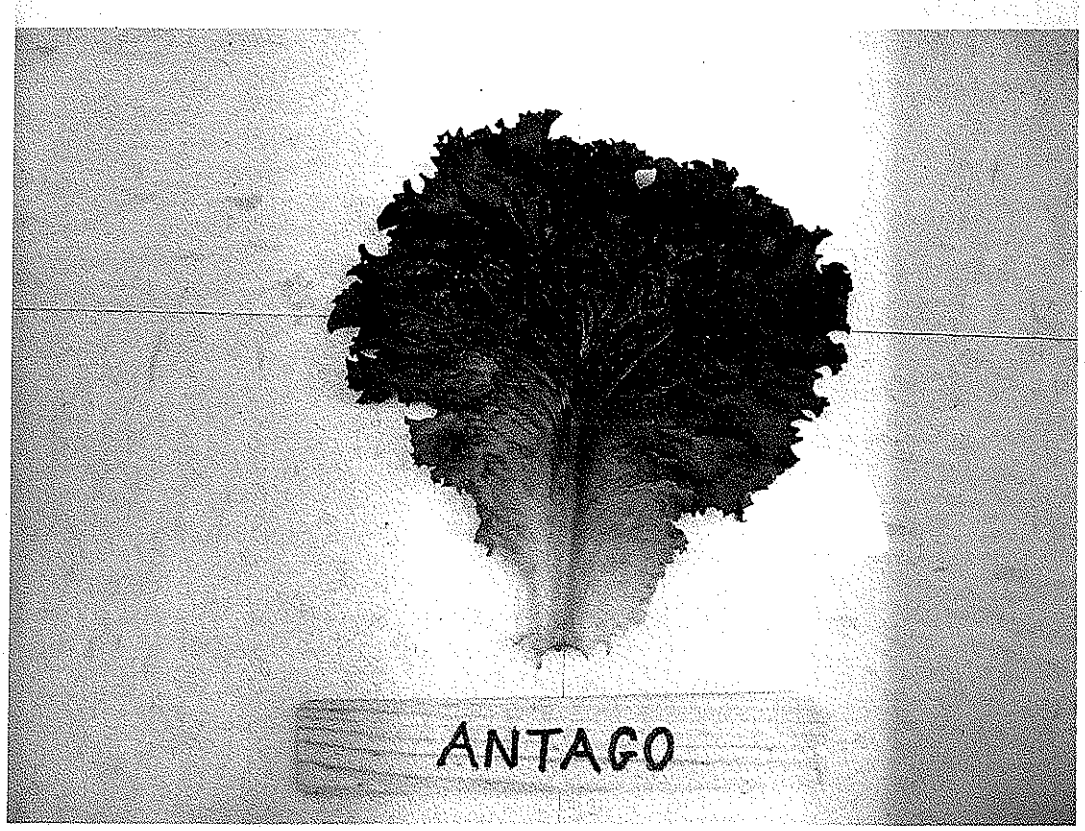


Item 3: Photocopy of fourth True leaf of seedling

Exibit C – Antago

Mature Head and Leaf of Antago

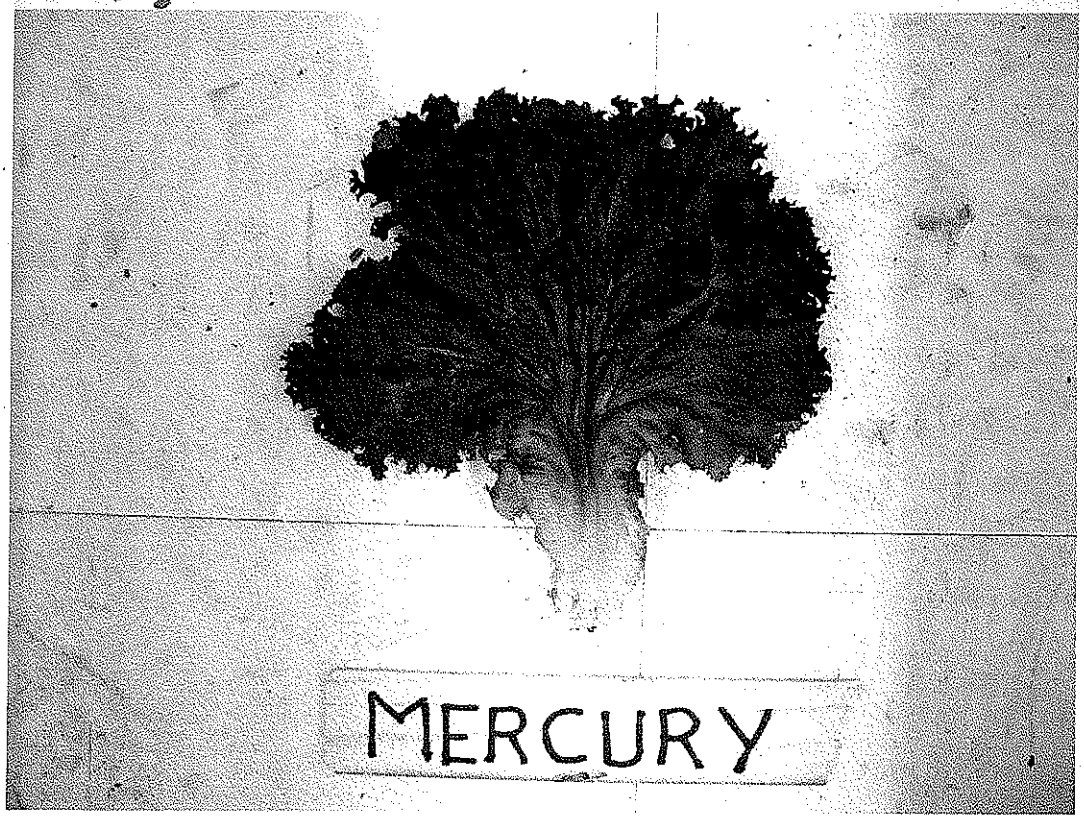




Exibit C – Antago

Mature Head and Leaf of Mercury

MERCURY



Exibit C – Antago

Mature Head and Leaf of Loretta

LORETTA

LORETTA

- Antago

Complete Data Set of Antago, Loretta, Mercury

SJB1 San Juan Bautista, California, REP 1 sowing: 5/20/06 transplant: 6/09/06 evaluation: 7/19/06
SJB2 San Juan Bautista, California, REP 2 idem idem idem

Trial	Plt#	Spread of Frame (cm)			Weight (gram)			Head Diameter (cm)			Head Height (cm)		
		Antago	Mercury	Loretta	Antago	Mercury	Loretta	Antago	Mercury	Loretta	Antago	Mercury	Loretta
SJB1	1	35.4	27.3	29.0	197.4	154.3	142.3	28.2	22.0	22.0	24.3	19.3	17.8
SJB1	2	35.0	25.4	31.0	163.1	101.2	144.9	24.9	20.3	24.8	22.7	16.3	19.8
SJB1	3	36.7	29.8	29.0	259.7	141.0	134.1	29.1	23.2	23.9	25.3	21.8	19.2
SJB1	4	41.4	29.8	31.1	243.6	167.5	171.5	28.1	25.0	26.2	27.0	22.1	20.0
SJB1	5	38.0	29.0	28.0	191.2	168.6	155.4	28.5	24.8	23.9	24.9	20.4	19.1
SJB1	6	38.0	29.8	28.6	202.8	163.4	133.0	30.5	25.0	23.0	25.0	20.6	17.7
SJB1	7	35.6	28.9	29.3	235.5	149.3	146.4	29.4	24.9	25.4	25.3	19.6	18.9
SJB1	8	37.2	29.6	30.2	192.7	135.8	168.6	29.6	24.5	24.9	23.0	21.1	19.2
SJB1	9	35.5	23.7	28.9	189.5	106.9	166.8	30.2	24.2	22.6	21.7	19.8	21.0
SJB1	10	35.2	28.1	30.0	154.1	120.6	157.1	30.5	24.4	22.0	26.7	19.5	18.9
SJB1	11	32.8	28.8	30.0	212.8	169.1	173.8	30.9	24.2	25.9	24.5	21.6	19.9
SJB1	12	38.1	26.5	32.1	135.3	109.6	160.5	30.0	24.0	26.5	23.2	19.5	22.0
SJB1	13	35.2	27.0	31.9	174.9	121.4	156.3	28.3	24.7	24.1	27.7	17.7	21.1
SJB1	14	35.2	28.7	28.4	230.6	178.1	126.8	29.7	25.6	22.8	24.5	24.0	19.2
SJB1	15	34.0	29.4	19.0	202.7	135.7	110.2	30.0	24.4	22.2	24.3	20.6	18.6
SJB1	16	37.5	26.0	33.7	230.2	124.8	132.4	34.3	23.8	25.3	24.0	17.9	17.5
SJB1	17	32.0	28.4	27.0	151.2	140.3	123.4	26.5	24.7	23.8	20.6	20.7	19.2
SJB1	18	34.0	28.0	28.0	171.7	126.1	116.4	26.0	24.0	22.7	23.9	20.1	18.0
SJB1	19	29.3	26.8	29.0	112.2	133.8	150.2	25.8	23.8	25.6	19.2	17.7	17.9
SJB1	20	36.1	16.5	30.3	231.0	84.0	145.0	30.2	21.0	23.4	24.3	16.5	19.1
SJB2	1	36.2	28.4	27.9	258.8	189.0	157.3	30.9	24.3	23.2	27.4	18.7	19.7
SJB2	2	35.4	30.8	27.9	204.6	159.3	153.0	30.4	25.5	23.3	25.0	20.6	19.6
SJB2	3	32.9	28.9	28.6	140.0	133.5	148.8	27.0	24.5	22.5	22.4	20.9	19.0
SJB2	4	35.1	29.3	29.0	244.6	120.4	126.0	31.1	24.0	22.9	24.8	19.5	17.9
SJB2	5	38.6	30.6	27.3	245.0	201.7	142.0	32.2	26.1	22.9	24.1	20.0	19.7
SJB2	6	33.5	28.2	28.2	191.4	152.1	116.5	27.0	24.2	21.8	22.2	21.9	16.9
SJB2	7	33.5	28.2	29.7	135.9	150.0	168.6	28.7	23.7	26.0	22.0	19.3	19.2
SJB2	8	37.0	30.2	25.8	222.8	189.2	104.3	29.5	26.0	22.9	25.6	18.9	16.4
SJB2	9	40.5	27.0	31.5	305.2	133.5	187.6	32.8	21.5	25.6	26.0	17.5	20.0
SJB2	10	32.8	28.9	29.8	145.6	123.5	156.4	26.6	24.2	22.9	21.0	19.1	20.0
SJB2	11	33.3	32.0	30.0	205.5	196.4	185.4	29.8	24.5	25.9	24.1	20.6	21.2
SJB2	12	33.1	30.8	26.6	196.4	168.8	135.0	29.2	24.9	21.1	25.0	21.4	19.1
SJB2	13	34.9	27.9	27.8	210.0	127.3	121.3	31.6	23.3	23.0	24.3	20.0	17.3
SJB2	14	33.0	33.9	29.2	165.0	178.5	147.4	28.0	27.1	23.0	22.0	20.0	18.9
SJB2	15	32.0	32.0	27.8	139.1	139.7	135.4	26.8	25.2	25.0	22.4	21.5	18.6
SJB2	16	35.2	29.5	27.0	243.0	140.5	165.8	30.3	23.9	23.9	25.3	20.7	18.9
SJB2	17	33.3	28.9	29.5	182.3	132.7	157.6	30.7	23.1	22.4	22.3	20.6	19.1
SJB2	18	33.0	27.4	28.2	133.4	131.2	136.4	27.5	26.3	21.1	22.0	19.7	18.3
SJB2	19	35.5	32.5	29.0	229.7	180.3	145.3	30.7	24.1	23.7	24.8	22.9	20.2
SJB2	20	34.0	27.8	28.4	185.6	118.0	130.8	29.7	23.2	24.6	22.4	18.7	18.1
Mean		35.1	28.5	28.8	196.7	144.9	145.9	29.3	24.2	23.7	23.9	20.0	19.1
St.Dev.		2.4	2.8	2.3	42.8	27.5	19.8	2.0	1.3	1.5	1.9	1.6	1.2

- Antago (addition)

Complete Data Set of Antago, Loretta, Mercury

SJB3 San Juan Bautista, California, REP 1 sowing: 8/31/06 transplant: 10/4/06 evaluation: 12/4/06

SJB4 San Juan Bautista, California, REP 2 idem idem idem

Trial	Plt#	Spread of Frame (cm)			Weight (gram)			Plant Diameter (cm)			Plant Height (cm)		
		Antago	Mercury	Loretta	Antago	Mercury	Loretta	Antago	Mercury	Loretta	Antago	Mercury	Loretta
SJB3	1	40.0	25.1	27.9	126.3	62.3	59.7	26.0	23.2	24.0	21.1	14.3	14.7
SJB3	2	38.3	25.0	27.8	163.4	54.4	68.9	24.2	21.0	24.3	21.6	13.0	15.1
SJB3	3	35.7	27.1	24.2	168.4	70.1	48.3	26.3	21.9	20.1	22.1	15.3	13.1
SJB3	4	38.4	25.7	25.9	209.7	68.6	57.4	29.9	23.8	21.3	28.0	15.1	14.2
SJB3	5	42.8	28.2	27.9	193.0	78.2	67.0	28.3	24.5	24.0	22.8	13.7	14.3
SJB3	6	41.2	28.9	25.0	216.9	74.4	60.5	28.3	24.6	19.9	27.8	15.3	13.9
SJB3	7	40.7	31.9	24.4	203.0	82.6	51.2	29.3	22.1	18.2	23.4	16.5	13.1
SJB3	8	42.0	26.9	23.0	248.5	76.2	47.2	29.9	23.5	18.2	22.9	15.0	14.2
SJB3	9	39.0	26.1	27.3	162.5	63.2	73.0	24.1	22.0	25.0	22.7	14.7	15.2
SJB3	10	38.3	30.9	24.9	134.6	61.8	43.7	25.5	22.5	20.0	22.4	14.9	14.1
SJB3	11	38.6	30.1	22.4	191.7	72.7	31.5	29.1	27.8	18.3	22.4	16.3	11.6
SJB3	12	36.8	27.5	29.5	167.7	60.7	79.8	25.0	23.4	25.7	22.9	15.1	14.8
SJB3	13	40.8	32.1	28.0	193.8	81.5	51.2	29.2	22.2	21.2	24.0	17.3	14.9
SJB3	14	40.1	29.2	24.9	134.1	67.7	52.9	26.7	24.9	20.5	23.1	16.0	13.0
SJB3	15	40.9	28.3	26.2	191.8	68.5	47.8	27.4	23.8	22.5	23.2	15.2	12.3
SJB3	16	41.2	28.3	26.0	175.8	76.5	67.4	27.4	23.0	21.0	21.6	14.9	13.2
SJB3	17	41.3	29.9	25.1	216.9	65.8	50.5	35.3	21.0	20.4	23.0	16.1	13.2
SJB3	18	41.6	27.8	27.9	226.8	62.6	72.9	31.8	22.8	23.9	22.7	14.9	15.9
SJB3	19	43.0	29.0	23.0	164.0	52.6	48.8	27.9	21.0	22.0	23.5	14.2	12.9
SJB3	20	39.0	30.9	26.3	171.3	81.1	77.1	28.8	25.3	22.0	24.4	17.0	14.2
SJB4	1	35.5	28.8	33.2	141.0	82.9	105.0	28.5	26.2	25.9	19.2	16.1	18.0
SJB4	2	36.1	27.8	27.0	128.2	56.4	64.1	27.9	21.6	22.9	22.5	15.0	12.1
SJB4	3	35.9	25.1	26.8	149.5	67.9	57.9	31.1	24.0	23.0	19.1	13.8	13.9
SJB4	4	38.7	27.5	23.0	65.8	79.5	53.5	22.0	23.0	22.1	19.5	13.2	13.1
SJB4	5	40.9	25.9	24.0	206.2	47.5	53.5	31.9	22.2	21.9	22.8	11.8	14.0
SJB4	6	32.9	29.2	27.9	134.7	83.2	69.1	26.1	27.0	22.0	21.7	15.9	14.2
SJB4	7	35.4	29.5	34.0	134.2	84.6	137.2	25.2	21.4	25.0	19.9	16.2	18.5
SJB4	8	36.4	28.9	25.3	155.0	75.8	47.9	29.0	22.5	19.0	20.6	14.9	13.5
SJB4	9	42.1	25.6	25.2	209.8	51.0	59.1	31.2	20.3	20.8	23.9	14.0	13.1
SJB4	10	40.1	30.1	24.9	177.2	67.4	49.6	27.8	25.2	19.3	22.8	15.8	12.2
SJB4	11	41.9	27.3	24.5	155.0	86.6	43.2	29.0	26.5	19.2	21.0	17.3	12.3
SJB4	12	42.9	28.8	28.0	120.7	80.2	54.5	26.2	24.0	22.0	21.4	14.9	13.3
SJB4	13	38.1	31.3	28.5	71.4	88.8	55.4	23.3	27.2	17.5	20.0	16.6	15.2
SJB4	14	34.9	27.0	24.3	160.5	55.6	58.1	29.3	22.2	20.9	21.4	14.3	12.4
SJB4	15	38.9	30.5	27.1	87.0	68.4	57.0	21.9	23.6	21.3	23.6	15.9	14.4
SJB4	16	38.9	27.6	26.5	183.0	73.8	52.5	33.0	24.9	22.0	21.4	15.3	12.5
SJB4	17	40.0	30.2	29.2	125.4	72.7	64.6	27.5	27.1	23.8	22.3	15.6	13.6
SJB4	18	42.3	30.0	25.4	158.5	72.5	54.4	27.0	27.1	22.0	22.6	15.1	13.2
SJB4	19	41.6	25.4	26.3	149.3	67.4	58.4	25.0	22.3	20.7	22.3	14.0	14.1
SJB4	20	41.1	25.9	28.5	135.5	57.2	57.6	26.2	20.2	18.8	21.6	13.1	13.2
Mean		39.4	28.3	26.4	162.7	70.0	60.2	27.7	23.6	21.6	22.4	15.1	13.9
St.Dev.		2.5	2.0	2.5	40.5	10.6	17.6	2.9	2.0	2.2	1.8	1.2	1.4

- Antago

Complete Data Set of Antago, Loretta, Mercury (continue)

SJB1 San Juan Bautista, California, REP 1 sowing: 5/20/06 transplant: 6/09/06 evaluation: 7/19/06
SJB2 San Juan Bautista, California, REP 2 idem idem idem

Trial	Plt#	Width Leaf (cm)			Length Leaf (cm)			Core Length (cm)			Core Diameter (cm)			Color (RHS)		
		Antago	Mercury	Loretta	Antago	Mercury	Loretta	Antago	Mercury	Loretta	Antago	Mercury	Loretta	Antago	Mercury	Loretta
SJB1	1	19.3	15.0	13.4	18.2	13.9	14.5	146.2	108.9	85.8	19.0	15.8	14.9	187A	187A	187A
SJB1	2	18.0	13.0	16.8	18.4	13.0	14.9	143.1	74.8	120.2	19.0	14.0	16.0			
SJB1	3	18.6	14.1	15.0	18.0	13.2	15.9	215.2	126.9	82.9	18.9	12.0	12.2			
SJB1	4	18.5	14.3	18.1	18.9	14.5	15.6	209.5	134.6	96.1	21.3	13.8	15.4			
SJB1	5	20.7	16.2	16.1	19.8	14.7	14.9	148.2	103.0	80.9	21.0	14.0	15.4			
SJB1	6	19.2	16.0	15.7	18.2	15.9	14.7	204.5	122.3	67.2	20.8	15.0	13.9			
SJB1	7	19.8	14.4	14.9	18.4	14.8	14.4	226.0	99.7	76.1	19.2	14.8	13.7			
SJB1	8	19.5	15.6	16.2	18.3	15.8	14.2	155.2	115.5	83.9	19.7	13.8	13.2			
SJB1	9	17.9	16.7	15.8	18.4	14.6	14.6	120.9	85.5	117.5	21.5	11.4	15.9			
SJB1	10	14.9	14.8	15.5	16.6	13.8	14.5	136.8	101.2	88.7	17.8	10.8	15.3			
SJB1	11	18.0	15.1	15.6	17.8	14.2	14.2	203.0	129.4	122.2	17.8	13.0	16.3			
SJB1	12	16.3	14.5	16.4	19.0	14.4	17.0	133.1	113.9	133.2	16.0	12.5	15.6			
SJB1	13	16.8	15.2	16.7	18.1	14.8	15.8	147.0	81.7	103.0	17.6	13.4	12.0			
SJB1	14	17.5	14.6	15.8	17.9	15.3	14.5	191.3	169.7	89.3	18.8	14.8	13.5			
SJB1	15	16.3	15.0	15.5	17.2	14.5	13.9	188.9	100.1	62.3	18.0	11.5	12.6			
SJB1	16	19.0	14.8	15.0	19.1	14.0	13.9	148.1	81.3	62.4	19.8	12.8	13.0			
SJB1	17	15.3	15.0	15.0	15.8	14.5	13.9	145.9	128.6	92.0	15.8	13.4	13.1			
SJB1	18	17.7	14.2	16.1	17.5	13.2	13.7	148.0	111.8	83.2	17.2	12.6	13.2			
SJB1	19	14.7	15.2	16.0	14.9	13.9	14.0	130.8	83.1	87.8	16.1	12.5	14.2			
SJB1	20	18.0	14.8	15.2	19.3	13.2	15.1	181.2	82.0	85.5	18.9	10.9	15.9			
SJB2	1	20.3	16.0	16.1	18.7	15.2	14.1	246.4	70.8	74.6	17.9	15.4	14.0	187A	187A	187A
SJB2	2	16.7	16.2	15.1	18.2	14.5	14.9	206.0	112.0	89.4	18.7	14.3	12.6			
SJB2	3	17.2	15.4	15.0	16.5	14.5	13.5	120.3	116.9	79.7	15.8	13.0	13.8			
SJB2	4	20.2	14.9	16.2	18.5	14.6	15.0	156.5	105.2	61.7	19.1	13.9	13.2			
SJB2	5	20.4	16.8	15.2	18.8	15.9	14.0	164.5	99.8	85.7	20.5	15.9	12.5			
SJB2	6	17.6	14.9	14.9	17.2	15.2	14.0	186.7	127.9	69.6	17.4	14.5	13.3			
SJB2	7	15.5	14.5	15.4	15.7	14.1	13.9	190.5	94.4	75.0	15.8	14.5	14.9			
SJB2	8	19.3	16.9	14.8	18.0	15.0	12.2	226.9	70.8	73.5	18.4	15.0	13.1			
SJB2	9	20.1	14.9	16.7	18.8	13.5	15.0	209.7	77.5	100.4	21.2	13.5	15.0			
SJB2	10	16.0	14.5	16.0	16.9	14.1	15.8	102.3	102.3	89.8	16.5	13.7	13.9			
SJB2	11	18.1	14.9	16.9	16.4	16.0	14.1	203.1	118.9	122.7	18.4	14.5	12.9			
SJB2	12	17.4	15.7	16.4	16.8	15.5	13.9	239.0	103.7	107.6	19.0	14.8	13.0			
SJB2	13	19.1	16.3	13.1	18.5	14.7	14.0	190.6	84.5	62.3	19.1	13.9	13.9			
SJB2	14	16.9	19.1	17.0	15.8	16.0	15.0	166.0	92.3	68.8	17.3	13.9	14.9			
SJB2	15	16.8	16.5	15.6	17.4	16.2	13.5	168.2	111.3	91.1	16.7	15.3	13.9			
SJB2	16	19.0	15.5	16.2	19.0	15.1	14.9	207.9	93.2	76.1	18.8	12.4	13.0			
SJB2	17	17.7	15.1	15.8	18.1	14.5	13.9	141.2	121.0	98.6	19.0	12.3	13.0			
SJB2	18	16.3	15.7	15.1	16.7	14.0	13.8	135.0	86.4	84.7	16.4	13.5	12.9			
SJB2	19	18.9	14.0	15.0	18.8	16.0	14.0	212.4	142.8	111.8	18.8	15.8	12.6			
SJB2	20	16.1	16.3	15.9	17.1	14.6	13.4	158.5	112.5	81.0	16.9	14.5	13.1			
Mean		17.9	15.3	15.7	17.8	14.6	14.4	173.9	105.0	88.1	18.4	13.7	13.9	187A	187A	187A
Std.Dev.		1.6	1.1	0.9	1.1	0.9	0.8	36.3	21.3	18.1	1.6	1.3	1.2			

- - Antago (addition)

Complete Data Set of Antago, Loretta, Mercury

SJB3 San Juan Bautista, California, REP 1 sowing: 8/31/06 transplant: 10/4/06 evaluation: 12/4/06

SJB4 San Juan Bautista, California, REP 2 idem idem idem

Trial	Plt#	Width Leaf (cm)			Length Leaf (cm)			Core Length (mm)			Core Diameter (mm)		
		Antago	Mercury	Loretta	Antago	Mercury	Loretta	Antago	Mercury	Loretta	Antago	Mercury	Loretta
SJB3	1	16.0	12.0	14.8	19.3	13.3	14.2	49.9	26.5	21.8	15.8	9.8	9.1
SJB3	2	15.0	12.4	13.0	19.1	13.1	14.9	56.8	22.0	14.8	14.5	7.9	9.5
SJB3	3	19.3	13.9	10.7	21.4	14.3	12.9	100.9	29.1	14.9	16.1	10.2	10.0
SJB3	4	15.7	11.9	11.5	20.5	13.9	12.1	189.0	29.2	16.3	18.8	7.9	9.2
SJB3	5	14.3	12.6	12.3	19.8	13.9	14.0	59.8	32.1	20.5	18.0	5.1	8.7
SJB3	6	15.9	11.8	12.0	21.8	14.3	12.9	69.3	26.2	14.9	16.1	7.1	8.7
SJB3	7	18.9	12.2	12.9	21.0	16.8	12.9	67.5	25.0	15.4	17.2	7.5	10.0
SJB3	8	20.0	12.1	13.3	21.2	15.0	12.9	139.0	24.9	18.2	18.7	8.0	8.6
SJB3	9	14.9	12.4	12.2	18.2	14.0	14.3	85.0	25.0	19.8	16.2	8.2	9.2
SJB3	10	14.8	13.9	11.5	19.1	16.0	13.2	100.7	26.9	14.0	13.1	6.2	7.9
SJB3	11	19.2	13.9	12.0	20.5	16.1	12.9	100.2	29.8	12.7	16.1	8.0	8.1
SJB3	12	17.8	12.2	13.1	19.7	14.7	14.2	70.9	26.0	23.0	13.8	7.9	10.2
SJB3	13	18.9	13.4	12.0	21.9	15.8	13.8	70.6	29.8	18.5	14.2	9.2	9.1
SJB3	14	18.0	12.2	13.0	24.0	16.0	13.3	63.4	25.0	14.9	13.8	10.1	8.1
SJB3	15	20.2	11.1	12.9	21.9	14.3	12.9	60.8	21.2	22.1	16.5	8.7	9.6
SJB3	16	16.7	11.3	13.2	20.2	14.0	14.3	61.9	24.9	17.9	13.4	12.0	8.5
SJB3	17	17.3	13.8	12.6	20.2	15.1	14.4	82.7	32.1	14.8	15.8	8.5	9.7
SJB3	18	18.3	10.5	13.0	20.1	13.5	14.9	120.9	22.5	31.5	14.7	8.9	8.7
SJB3	19	16.8	12.8	11.6	22.3	15.4	12.4	89.9	20.0	15.2	14.0	9.2	7.9
SJB3	20	18.0	12.9	12.9	23.0	16.5	12.8	50.0	28.2	22.1	15.4	7.1	8.5
SJB4	1	13.9	11.5	14.4	17.9	14.9	16.8	62.4	28.2	21.9	15.4	12.0	18.4
SJB4	2	14.9	11.2	14.3	20.0	14.2	14.0	54.9	26.1	17.4	13.3	7.8	8.8
SJB4	3	15.2	12.0	12.0	19.9	13.7	13.4	29.5	21.0	17.7	14.0	10.1	8.4
SJB4	4	17.1	12.2	11.6	20.6	14.6	13.9	50.0	19.9	18.1	14.4	11.1	9.2
SJB4	5	18.2	12.5	12.8	20.5	13.6	12.9	47.9	25.9	15.7	17.1	8.3	7.8
SJB4	6	16.9	12.6	14.2	19.8	15.3	15.3	40.2	29.8	28.9	13.8	10.3	9.8
SJB4	7	16.1	13.6	13.5	18.9	15.5	17.8	28.0	28.4	22.5	11.1	10.9	18.4
SJB4	8	18.1	13.8	12.0	20.0	16.3	13.2	63.6	35.0	21.1	15.5	9.7	8.2
SJB4	9	17.6	12.7	11.0	21.0	13.2	12.2	51.8	19.3	24.0	14.1	8.2	8.7
SJB4	10	16.1	13.3	14.0	22.2	15.0	12.8	100.0	24.8	17.8	15.8	9.4	7.7
SJB4	11	16.1	12.8	12.0	19.2	14.9	12.9	30.6	24.1	15.4	15.0	9.7	7.8
SJB4	12	14.9	13.4	11.3	19.1	14.8	13.8	39.5	33.9	24.6	15.0	8.0	8.4
SJB4	13	15.0	14.6	14.0	19.1	15.3	14.3	34.9	34.0	20.7	11.3	10.8	9.8
SJB4	14	17.1	11.0	11.9	19.8	14.4	11.0	41.5	12.1	22.4	14.5	10.5	7.8
SJB4	15	16.8	11.6	12.0	20.0	15.1	14.0	26.2	24.5	18.9	9.9	11.0	9.1
SJB4	16	17.1	11.0	12.3	19.3	14.5	14.0	42.1	20.3	17.5	15.8	10.8	8.7
SJB4	17	12.1	12.2	13.8	19.4	15.2	14.3	36.7	31.0	17.7	14.8	11.5	8.5
SJB4	18	17.6	13.8	11.7	19.9	15.9	13.4	41.8	25.8	11.9	12.8	8.8	7.3
SJB4	19	14.8	11.9	12.3	19.0	13.8	13.2	80.0	31.5	21.4	16.0	7.3	8.8
SJB4	20	20.0	11.5	11.9	20.1	12.8	12.8	40.1	24.7	20.6	14.9	9.9	8.3
Mean		16.8	12.5	12.6	20.3	14.7	13.7	65.8	26.2	19.0	14.9	9.1	9.2
Std.Dev.		1.8	1.0	1.0	1.3	1.0	1.2	33.0	4.7	4.2	1.9	1.6	2.2

- Antago

Statistical analysis Antago vs Mercury

SJB1	San Juan Bautista, California, REP 1	sowing: 5/20/06	transplant: 6/09/06	evaluation: 7/19/06
SJB2	San Juan Bautista, California, REP 2	idem	idem	idem

Trial:			SJB 1		SJB 2	
			Antago	Mercury	Antago	Mercury
Spread of Frame Leaves (cm):						
Mean			35.6	27.4	34.6	29.7
Std Dev.			2.6	3.0	2.1	1.9
ANOVA (F calc.):	Rep	= 1.44 ns				
	Var	= 145.3 **				
	Rep x Var	= 8.81 **				
Weight (grams):						
Mean			194.1	136.6	199.2	153.3
Std Dev.			38.7	25.5	47.3	27.5
ANOVA (F calc.):	Rep	= 1.85 ns				
	Var	= 41.6 **				
	Rep x Var	= 0.53 ns				
Plant Diameter (cm):						
Mean			29.0	23.9	29.5	24.5
Std Dev.			2.1	1.4	1.9	1.3
ANOVA (F calc.):	Rep	= 1.88 ns				
	Var	= 177.8 **				
	Rep x Var	= 0.02 ns				
Plant Height (cm):						
Mean			24.1	19.8	23.8	20.1
Std Dev.			2.0	1.9	1.7	1.3
ANOVA (F calc.):	Rep	= 0.01 ns				
	Var	= 99.9 **				
	Rep x Var	= 2.02 ns				
Width Leaf (cm):						
Mean			17.8	14.9	18.0	15.7
Std Dev.			1.7	0.8	1.6	1.1
ANOVA (F calc.):	Rep	= 2.56 ns				
	Var	= 73.7 **				
	Rep x Var	= 1.00 ns				
Length Leaf (cm):						
Mean			18.0	14.3	17.6	15.0
Std Dev.			1.2	0.8	1.1	0.8
ANOVA (F calc.):	Rep	= 0.34 ns				
	Var	= 199.4 **				
	Rep x Var	= 5.5 *				
Core Length (mm):						
Mean			166.1	107.7	181.6	102.2
Std Dev.			32.5	23.6	39.0	19.0
ANOVA (F calc.):	Rep	= 0.57 ns				
	Var	= 108.6 **				
	Rep x Var	= 2.50 ns				
Core Diameter (mm):						
Mean			18.7	13.1	18.1	14.2
Std Dev.			1.7	1.3	1.5	1.0
ANOVA (F calc.):	Rep	= 0.54 ns				
	Var	= 221.1 **				
	Rep x Var	= 7.32 **				

#200600260

: - Antago (addition)

Statistical analysis Antago vs Mercury

SJB3	San Juan Bautista, California, REP 1	sowing: 8/31/06	transplant: 10/4/06	evaluation: 12/4/06
SJB4	San Juan Bautista, California, REP 2	idem	idem	idem

n = 20; F(.05) = 3.97; F(.01)=6.98

Trial:			SJB 1		SJB 2	
			Antago	Mercury	Antago	Mercury
Spread of Frame Leaves (cm):						
Mean			40.0	28.4	38.7	28.1
Std Dev.			1.9	2.1	2.9	1.9
ANOVA (F calc.):	Rep	= 2.44 ns				
	Var	= 480.4 **				
	Rep x Var	= 0.85 ns				
Weight (grams):						
Mean			183.0	69.1	142.4	71.0
Std Dev.			32.2	8.8	38.1	12.3
ANOVA (F calc.):	Rep	= 11.0 **				
	Var	= 252.8 **				
	Rep x Var	= 13.3 **				
Plant Diameter (cm):						
Mean			28.0	23.2	27.5	23.9
Std Dev.			2.7	1.7	3.1	2.4
ANOVA (F calc.):	Rep	= 0.02 ns				
	Var	= 55.6 **				
	Rep x Var	= 1.3 ns				
Plant Height (cm):						
Mean			23.3	15.2	21.5	14.9
Std Dev.			1.8	1.1	1.4	1.3
ANOVA (F calc.):	Rep	= 10.9 **				
	Var	= 528.4 **				
	Rep x Var	= 5.59 *				
Width Leaf (cm):						
Mean			17.3	12.5	16.3	12.5
Std Dev.			1.8	1.0	1.8	1.0
ANOVA (F calc.):	Rep	= 2.48 ns				
	Var	= 177.1 **				
	Rep x Var	= 2.44 ns				
Length Leaf (cm):						
Mean			20.8	14.8	19.8	14.7
Std Dev.			1.4	1.1	0.9	0.9
ANOVA (F calc.):	Rep	= 5.13 *				
	Var	= 499.5 **				
	Rep x Var	= 2.76 ns				
Core Length (mm):						
Mean			84.5	26.3	47.1	26.0
Std Dev.			34.2	3.4	18.3	5.8
ANOVA (F calc.):	Rep	= 18.3 **				
	Var	= 81.1 **				
	Rep x Var	= 17.8 **				
Core Diameter (mm):						
Mean			15.6	8.4	14.2	9.8
Std Dev.			1.7	1.5	1.8	1.3
ANOVA (F calc.):	Rep	= 0.00 ns				
	Var	= 266.0 **				
	Rep x Var	= 15.5 **				

ns = not significant different, * = significant different at .05 prob. level, ** = significant different at .01 prob. level

- Antago

Statistical analysis Antago vs Loretta

SJB1	San Juan Bautista, California, REP 1	sowing: 5/20/06	transplant: 6/09/06	evaluation: 7/19/06
SJB2	San Juan Bautista, California, REP 2	idem	idem	idem

Trial:			SJB 1		SJB 2	
			Antago	Loretta	Antago	Loretta
Spread of Frame Leaves (cm):						
Mean			35.6	29.2	34.6	28.5
Std Dev.			2.6	2.9	2.1	1.3
ANOVA (F calc.):	Rep	= 2.82 ns				
	Var	= 148.0 **				
	Rep x Var	= 0.04 ns				
Weight (grams):						
Mean			194.1	145.8	199.2	146.0
Std Dev.			38.7	18.4	47.3	21.5
ANOVA (F calc.):	Rep	= 0.13 ns				
	Var	= 45.4 **				
	Rep x Var	= 0.10 ns				
Plant Diameter (cm):						
Mean			29.0	24.1	29.5	23.4
Std Dev.			2.1	1.5	1.9	1.4
ANOVA (F calc.):	Rep	= 0.05 ns				
	Var	= 618.8 **				
	Rep x Var	= 6.67 ns				
Plant Height (cm):						
Mean			24.1	19.2	23.8	18.9
Std Dev.			2.0	1.2	1.7	1.2
ANOVA (F calc.):	Rep	= 0.85 ns				
	Var	= 191.2 **				
	Rep x Var	= 0.01 ns				
Width Leaf (cm):						
Mean			17.8	15.7	18.0	15.6
Std Dev.			1.7	0.9	1.6	0.9
ANOVA (F calc.):	Rep	= 0.01 ns				
	Var	= 56.3 **				
	Rep x Var	= 0.26 ns				
Length Leaf (cm):						
Mean			18.0	14.7	17.6	14.1
Std Dev.			1.2	0.8	1.1	0.8
ANOVA (F calc.):	Rep	= 4.83 *				
	Var	= 237.47 **				
	Rep x Var	= 0.15 ns				
Core Length (mm):						
Mean			166.1	91.0	181.6	85.2
Std Dev.			32.5	19.6	39.0	16.5
ANOVA (F calc.):	Rep	= 0.57 ns				
	Var	= 181.7 **				
	Rep x Var	= 2.78 ns				
Core Diameter (mm):						
Mean			18.7	14.3	18.1	13.5
Std Dev.			1.7	1.4	1.5	0.8
ANOVA (F calc.):	Rep	= 5.27 *				
	Var	= 215.7 **				
	Rep x Var	= 0.07 ns				

- Antago (addition)

Statistical analysis Antago vs Loretta

SJB3	San Juan Bautista, California, REP 1	sowing: 8/31/06	transplant: 10/4/06	evaluation: 12/4/06
SJB4	San Juan Bautista, California, REP 2	idem	idem	idem

n = 20; F(.05) = 3.97; F(.01)=6.98

Trial:			SJB 1		SJB 2	
			Antago	Loretta	Antago	Loretta
Spread of Frame Leaves (cm):						
Mean			40.0	25.9	38.7	27.0
Std Dev.			1.9	2.0	2.9	2.8
ANOVA (F calc.):	Rep	= 0.02 ns				
	Var	= 553.0 **				
	Rep x Var	= 4.59 *				
Weight (grams):						
Mean			183.0	57.8	142.4	62.6
Std Dev.			32.2	12.7	38.1	21.5
ANOVA (F calc.):	Rep	= 8.2 **				
	Var	= 269.8 **				
	Rep x Var	= 13.2 **				
Plant Diameter (cm):						
Mean			28.0	21.6	27.5	21.5
Std Dev.			2.7	2.3	3.1	2.1
ANOVA (F calc.):	Rep	= 0.36 ns				
	Var	= 116.2 **				
	Rep x Var	= 0.15 ns				
Plant Height (cm):						
Mean			23.3	13.9	21.5	13.8
Std Dev.			1.8	1.1	1.4	1.7
ANOVA (F calc.):	Rep	= 7.47 **				
	Var	= 629.6 **				
	Rep x Var	= 6.61 *				
Width Leaf (cm):						
Mean			17.3	12.5	16.3	12.7
Std Dev.			1.8	0.9	1.8	1.1
ANOVA (F calc.):	Rep	= 1.89 ns				
	Var	= 166.5 **				
	Rep x Var	= 3.10 ns				
Length Leaf (cm):						
Mean			20.8	13.5	19.8	13.8
Std Dev.			1.4	0.8	0.9	1.5
ANOVA (F calc.):	Rep	= 1.60 ns				
	Var	= 598.3 **				
	Rep x Var	= 5.47 *				
Core Length (mm):						
Mean			84.5	18.2	47.1	19.8
Std Dev.			34.2	4.4	18.3	3.8
ANOVA (F calc.):	Rep	= 16.6 **				
	Var	= 113.9 **				
	Rep x Var	= 19.8 **				
Core Diameter (mm):						
Mean			15.6	9.0	14.2	9.5
Std Dev.			1.7	0.7	1.8	3.1
ANOVA (F calc.):	Rep	= 0.90 ns				
	Var	= 158.6 **				
	Rep x Var	= 4.50 *				

ns = not significant different, * = significant different at .05 prob. level, ** = significant different at .01 prob. level

- Antago

Seedling measurements at 4th leaf stage

	Antago			Mercury			Loretta		
Plt #	Length (cm)	Width (cm)	ratio (l/w*10)	Length (cm)	Width (cm)	ratio (l/w*10)	Length (cm)	Width (cm)	ratio (l/w*10)
1	8.90	5.41	16.45	9.62	7.24	13.29	10.60	8.92	11.88
2	7.98	5.57	14.33	9.70	7.85	12.36	9.89	7.29	13.57
3	8.92	5.94	15.02	9.48	8.00	11.85	9.49	8.40	11.30
4	9.00	6.40	14.06	10.13	8.00	12.66	9.60	9.52	10.08
5	8.96	5.80	15.45	10.94	7.73	14.15	9.18	7.50	12.24
6	9.50	7.50	12.67	9.69	7.68	12.62	8.42	8.40	10.02
7	8.00	5.48	14.60	9.50	6.67	14.24	8.20	9.10	9.01
8	8.50	5.81	14.63	9.88	7.50	13.17	8.82	9.28	9.50
9	8.70	6.00	14.50	10.15	7.00	14.50	8.70	8.72	9.98
10	9.00	6.32	14.24	10.79	7.20	14.99	9.85	8.68	11.35
11	8.90	7.65	11.63	9.77	8.56	11.41	7.68	7.20	10.67
12	7.70	6.48	11.88	9.75	8.53	11.43	7.50	6.47	11.59
13	9.05	7.30	12.40	9.00	7.40	12.16	8.75	8.25	10.61
14	7.36	5.72	12.87	9.06	7.10	12.76	8.70	7.71	11.28
15	8.28	4.69	17.65	8.72	7.77	11.22	8.06	8.10	9.95
16	7.70	4.78	16.11	8.15	7.75	10.52	9.08	7.20	12.61
17	7.06	5.28	13.37	8.06	7.54	10.69	7.63	6.50	11.74
18	6.97	5.70	12.23	8.98	7.00	12.83	8.14	7.39	11.01
19	6.47	5.30	12.21	9.00	7.47	12.05	8.77	8.63	10.16
20	7.07	4.42	16.00	8.60	6.92	12.43	8.55	8.50	10.06
Mean	8.20	5.88	**14.11**	9.45	7.55	**12.57**	8.78	8.09	**10.93**

- Antago (addition)

Bolting measurements

Location San Juan Bautista, California (greenhouse) **sowing: 5/20/06** **transplant: 6/09/06**

Plt#	#Days Seed Stalk Emergence			Height Mature Seed Stalk (cm)			Spread of Bolter Plant (cm)		
	Antago	Mercury	Loretta	Antago	Mercury	Loretta	Antago	Mercury	Loretta
1	69	70	72	108.0	154.5	153.8	45.7	61.1	55.5
2	66	71	73	104.2	159.0	150.0	68.2	60.5	73.7
3	61	67	72	118.4	134.9	128.2	65.0	53.7	57.1
4	67	72	72	102.2	158.0	140.6	70.0	58.5	49.0
5	61	67	72	115.8	162.1	157.3	63.8	55.7	51.8
6	64	70	72	113.3	146.5	147.2	83.6	59.3	78.3
7	69	67	72	123.5	143.9	150.2	63.0	33.4	59.0
8	67	67	72	122.3	145.0	146.2	72.7	36.1	50.6
Mean	66	69	72	113.5	150.5	146.7	66.5	52.3	59.4
St.Dev	3.2	2.1	0.4	8.0	9.4	9.0	10.7	11.1	10.9

Location San Juan Bautista, California (open field) **sowing: 5/20/06** **transplant: 6/09/06**

Plt#	#Days Seed Stalk Emergence			Height Mature Seed Stalk (cm)			Spread of Bolter Plant (cm)		
	Antago	Mercury	Loretta	Antago	Mercury	Loretta	Antago	Mercury	Loretta
1	64	67	68	93.0	95.3	88.7	47.0	39.5	42.4
2	65	65	69	93.3	-	81.7	50.8	-	40.3
3	64	65	69	96.0	-	86.0	47.9	-	45.8
4	62	71	71	85.1	92.7	84.2	40.8	32.8	35.6
5	64	67	76	91.7	-	81.5	42.4	-	36.5
6	62	73	67	84.5	88.9	79.6	39.2	32.0	30.8
7	63	71	-	89.0	99.0	-	42.2	36.3	-
8	64	70	-	81.2	90.9	-	47.5	34.4	-
Mean	64	69	70	89.2	93.4	83.6	44.7	35.0	38.6
St.Dev	1.1	3.0	3.2	5.2	3.9	3.4	4.1	3.0	5.4

Location Soledad, California **sowing: 4/26/2006**

Plt#	#Days Seed Stalk Emergence			Height Mature Seed Stalk (cm)			Spread of Bolter Plant (cm)		
	Antago	Mercury	Loretta	Antago	Mercury	Loretta	Antago	Mercury	Loretta
1	71	76	-	89.4	92.1	-	33.6	29.9	-
2	71	80	-	80.6	100.8	-	29.7	26.2	-
3	72	78	-	68.7	92.7	-	35.3	24.6	-
4	75	78	-	78.4	78.6	-	37.2	23.7	-
5	74	79	-	67.5	82.5	-	34.2	28.4	-
6	72	80	-	94.4	73.2	-	33.6	23.8	-
7	73	76	-	92.1	95.5	-	32.5	28.7	-
8	71	81	-	81.6	77.4	-	31.7	21.8	-
9	72	80	-	85.3	84.8	-	32.6	20.6	-
10	75	79	-	84.4	100.3	-	33.8	21.4	-
Mean	73	79	-	82.2	87.8	-	33.4	24.9	-
Stdev	1.6	1.7	-	9.0	9.8	-	2.0	3.3	-

REPRODUCE LOCALLY. Include form number and edition date on all reproductions. FORM APPROVED - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued *(7 U.S.C. 2421)*. The information is held confidential until the certificate is issued *(7 U.S.C. 2426)*.

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
ENZA ZADEN BEHEER B.V.	E19.6360	ANTAGO
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	**5. TELEPHONE** *(Include area code)*	**6. FAX** *(Include area code)*
HALING 1E, 1602 DB ENKHUIZEN P.O.BOX 7, 1600 AA ENKHUIZEN THE NETHERLANDS	+31.228.315.844	+31.228.315.854
	7. PVPO NUMBER 200600260	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. **If no, please explain.** ☒ **YES** ☐ **NO**

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? **If no, give name of country.** ☐ **YES** ☒ **NO**

THE NETHERLANDS

10. Is the applicant the original owner? ☒ **YES** ☐ **NO** **If no, please answer one of the following:**

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?
☐ **YES** ☐ **NO** **If no, give name of country**

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?
☐ **YES** ☐ **NO** **If no, give name of country**

11. Additional explanation on ownership *(Trace ownership from original breeder to current owner. Use the reverse for extra space if needed)*:

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

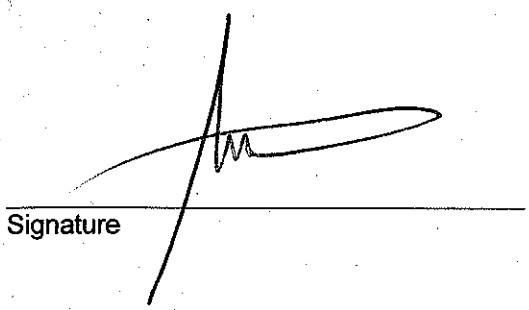
The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT F
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S)	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)	TEMPORARY OR EXPERIMENTAL DESIGNATION
ENZA ZADEN BEHEER B.V.	HALING 1E, 1602 DB ENKHUIZEN P.O. Box 7, 1600 AA ENKHUIZEN THE NETHERLANDS	E19.6360
		VARIETY NAME ANTAGO
NAME OF OWNER REPRESENTATIVE (S)	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)	FOR OFFICIAL USE ONLY
AERNOUDT AARDSE	P.O. Box 866 525 LUCY BROWN LANE SAN JUAN BAUTISTA, CA 95045	PVPO NUMBER 200600260

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.



Signature

08/02/2006
Date

32